

## REMARKS

Claims 1, 7-21 and 29-50 are pending. Claims 34-50 are withdrawn as being directed to a non-elected invention. Claims 1, 7-21, and 29-33 are rejected under 35 U.S.C. § 103(a) for obviousness over WO 01/74164 in view of Kishimoto et al. (Genes Dev. 14:1181-1185, 2000; hereinafter "Kishimoto") and WO 99/01034, as supported by Zhu et al. (Cancer Res. 64:7918-7926, 2004; hereinafter "Zhu") and WO 00/69449. By this reply, Applicants address the Office's rejection.

### Rejection under 35 U.S.C. § 103(a)

Claims 1, 7-21, and 29-33 stand rejected under 35 U.S.C. § 103(a) for obviousness over WO 01/74164 in view of Kishimoto and WO 99/01034, as supported by Zhu and WO 00/69449. The Office states that it would be obvious, based on WO 01/74164 and Zhu,<sup>1</sup> for one of skill in the art to use prostate epithelial cells to produce a conditioned medium in which to culture dermal papilla cells. It is respectfully submitted that the present rejection is based on gross errors of law and fact and should be withdrawn.

WO 01/74164 fails to teach or suggest the culturing of hair inductive cells, such as dermal papilla and dermal sheath cells, in a medium supplemented by prostate epithelial cell-conditioned medium; WO 01/74164 makes no mention of prostate epithelial cells. Furthermore, none of the other prior art publications cited by the Office (Kishimoto, WO 99/01034, and WO

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<sup>1</sup> In a telephonic communication with Examiner Weber subsequent to the mailing of the present Office Action, Applicants explained that Zhu is not prior art to the present application. Examiner Weber acknowledged that Zhu is not prior art to the present application, but stated that Zhu is relevant to present claims 1, 7-21, and 29-33 because it shows that prostate epithelial cells inherently produce Wnts. Applicants do not understand the legal significance of this comment and do not address it further.

00/69449), whether considered alone or in combination with WO 01/74164, teaches or suggests the culturing of hair inductive cells, such as dermal papilla and dermal sheath cells, in a medium supplemented by prostate epithelial cell-conditioned medium. Moreover, none of these supplemental publications mentions or directs the skilled artisan to use prostate epithelial cells to prepare conditioned medium for use in the culturing of hair inductive cells.

The only publication cited by the Office that mentions prostate epithelial cells is Zhu. Zhu is not prior art to the present application and cannot be applied as such.<sup>2</sup> Zhu's disclosure that prostate epithelial cells express Wnts was not known at the time the present application was filed. Without the knowledge provided by Zhu, the skilled artisan would have had no reason to culture dermal papilla cells in medium containing prostate epithelial cell-conditioned medium. It is impermissible for the Office to rely on post-filing date publications, such as Zhu, to establish a motivation that is absent in the prior art, which is exactly what the Office has done.

None of the *prior art* cited by the Office teaches or suggests, much less motivates the skilled artisan to engage in, the culturing of hair inductive cells, such as dermal papilla and dermal sheath cells, in a medium supplemented by prostate epithelial cell-conditioned medium. Thus, contrary to the Office's erroneous factual and legal conclusions, none of the cited prior art, either singly or in combination, teaches or suggests the subject matter of present claims 1, 7-21, and 29-33. The obviousness rejection of claims 1, 7-21, and 29-33 should be withdrawn.

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<sup>2</sup> The present application claims benefit to the filing date of U.S. Serial No. 60/426,111, which is November 14, 2002. Zhu was published more than one year after the '111 application was filed, i.e., on November 1, 2004.

CONCLUSION

In view of the above remarks, Applicants respectfully submit that present claims 1, 7-21, and 29-33 are in condition for allowance, and such action is respectfully requested.


Enclosed is a petition to extend the period for replying for one month, to and including February 14, 2009.

If there are any charges or any credits, kindly apply them to Deposit Account No. 03-2095.

Respectfully submitted,

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